

Notice of Allowability

Application No.

10/757,575

Applicant(s)

BAKSH ET AL.

Examiner

Robert A. Hopkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed 1-15-04.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 1-15-04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In claim 12 line 23, after " inner wall", insert -- , -- .

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the lines and numerical designations are not of a consistent height and thickness. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Allowable Subject Matter

Claims 1-20 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 1 recites "a deflector funnel having a first funnel opening at one end, a second funnel opening at its opposite end with the second opening larger than the first opening, said first funnel opening extending to form a tapered neck terminating at the

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second funnel opening, said first funnel opening being juxtaposed one of the vessel openings with the tapered segment being juxtaposed the inner vessel wall adjacent to said vessel opening to provide a channel between the funnel and the inner vessel wall; a perforated cap section disposed to cap the second funnel opening, and said funnel/cap arrangement adapted for providing an effectively uniform distribution of a fluid feed to the adsorbent bed”.

Cam et al(5779773) teaches an adsorption system having a vessel containing a bed of adsorbent material, a first vessel opening, a second vessel opening at the opposite end, a perforated cap section(26), and a deflector(72; figures 10 and 11) upstream of the perforated cap section. However the deflector is not a deflector funnel having a first funnel opening at one end, a second funnel opening at its opposite end with the second opening larger than the first opening. Lee et al(6605135) teaches an adsorption system having a vessel containing a bed of adsorbent material, a first vessel opening, a second vessel opening at the opposite end, a perforated cap section(23), and a deflector(27; figure 2) upstream of the perforated cap section. However the deflector is not a deflector funnel having a first funnel opening at one end, a second funnel opening at its opposite end with the second opening larger than the first opening. Andreani et al(5873929) teaches an adsorption system having a vessel containing a bed of adsorbent material, a first vessel opening, a second vessel opening at the opposite end, and a perforated cap section(25). However, Andreani et al does not teach a deflector funnel having a first funnel opening at one end, a second funnel opening at its opposite end with the second opening larger than the first opening. It

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would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a deflector funnel having a first funnel opening at one end, a second funnel opening at its opposite end with the second opening larger than the first opening, said first funnel opening extending to form a tapered neck terminating at the second funnel opening, said first funnel opening being juxtaposed one of the vessel openings with the tapered segment being juxtaposed the inner vessel wall adjacent to said vessel opening to provide a channel between the funnel and the inner vessel wall; a perforated cap section disposed to cap the second funnel opening, and said funnel/cap arrangement adapted for providing an effectively uniform distribution of a fluid feed to the adsorbent bed because neither Cam et al nor Lee et al nor Andreani et al suggest such a modification. Claims 2-11 depend on claim 1 and hence are also allowed.

Claim 12 recites " a distribution funnel having an inner wall spaced-apart from an outer wall to provide a fluid channel therebetween and having a first funnel opening at one end and a second funnel opening at its opposite end with the second opening larger than the first opening, the spaced walls having a perforated end at the second funnel opening and an opening end at the first funnel opening so that the spaced-apart walls provides a fluid channel in which the fluid flows from the funnel open end through the perforated funnel end; said first funnel opening extending to form a tapered neck segment terminating at the second funnel opening, said first funnel opening being juxtaposed one of the vessel openings with the tapered segment being adjacent to the vessel inner wall, a perforated cap section disposed to cap the second funnel opening,

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and said funnel cap arrangement adapted for providing an effectively uniform distribution of a fluid feed to the adsorbent bed”.

Cam et al(5779773) teaches an adsorption system having a vessel containing a bed of adsorbent material, a first vessel opening, a second vessel opening at the opposite end, a perforated cap section(26), and a deflector(72; figures 10 and 11) upstream of the perforated cap section. However the deflector is not a distribution funnel having an inner wall spaced-apart from an outer wall to provide a fluid channel therebetween and having a first funnel opening at one end and a second funnel opening at its opposite end with the second opening larger than the first opening. Lee et al(6605135) teaches an adsorption system having a vessel containing a bed of adsorbent material, a first vessel opening, a second vessel opening at the opposite end, a perforated cap section(23), and a deflector(27; figure 2) upstream of the perforated cap section. However the deflector is not a distribution funnel having an inner wall spaced-apart from an outer wall to provide a fluid channel therebetween and having a first funnel opening at one end and a second funnel opening at its opposite end with the second opening larger than the first opening. Andreani et al(5873929) teaches an adsorption system having a vessel containing a bed of adsorbent material, a first vessel opening, a second vessel opening at the opposite end, and a perforated cap section(25). However, Andreani et al does not teach a distribution funnel having an inner wall spaced-apart from an outer wall to provide a fluid channel therebetween and having a first funnel opening at one end and a second funnel opening at its opposite end with the second opening larger than the first opening. It would not have been

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obvious to someone of ordinary skill in the art at the time of the invention to provide a distribution funnel having an inner wall spaced-apart from an outer wall to provide a fluid channel therebetween and having a first funnel opening at one end and a second funnel opening at its opposite end with the second opening larger than the first opening, the spaced walls having a perforated end at the second funnel opening and an opening end at the first funnel opening so that the spaced-apart walls provides a fluid channel in which the fluid flows from the funnel open end through the perforated funnel end; said first funnel opening extending to form a tapered neck segment terminating at the second funnel opening, said first funnel opening being juxtaposed one of the vessel openings with the tapered segment being adjacent to the vessel inner wall, a perforated cap section disposed to cap the second funnel opening , and said funnel cap arrangement adapted for providing an effectively uniform distribution of a fluid feed to the adsorbent bed because neither Cam et al nor Lee et al nor Andreani et al suggest such a modification. Claims 13-20 depend on claim 12 and hence are also allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Friday, 7am-4pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RAH


ROBERT A. HOPKINS
PRIMARY EXAMINER
